

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Stephan WURSTHORN et al.  
 Based on : PCT/DE 03/02100  
 For : EXHAUST TREATMENT APPARATUS  
 Docket No. : R.304144  
 Customer No. : 02119

Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, VA 22313-1450

Date: April 13, 2005

**INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97(b).**  
**AND EXPLANATION OF THE RELEVANCE OF THE CITED PRIOR ART**

Sir:

The undersigned hereby requests that the prior art cited on the attached prior art statement be placed of record in the application file and be considered by the examiner.

This citation of prior art is made under 37 CFR 1.97(b), since it is being filed within three months of the filing date and before the mailing of a first Office action.

The relevance of the prior art cited on the attached form 1449 is as follows:

**US 4,390,355**

This patent teaches a diesel particulate trap comprising a ceramic monolith filter having inlet channels of decreasing cross-sectional flow area and increasing wall thickness relative to the distance from the inlet end to the outlet end of the filter.

**US 4,846,906**

This patent teaches a porous ceramic article comprised of a porous ceramic body portion (of either predominantly open- or predominantly closed-cell porosity) having, integral with pre-selected surfaces thereof, a thin porous ceramic membrane layer which itself may be of open- or closed-celled porosity. Also described are methods of bringing about such membrane layers and such articles. The invention is particularly useful for providing porous ceramic filtering elements, such as diesel particulate traps, wherein the body portion has a predominant open-celled porosity and wherein the porous ceramic membrane surfaces also are open-celled porosity. The membrane surface pores are smaller than those of the body portion. The invention may also be useful in providing articles such as kiln furniture having smooth porous ceramic membrane layers or skins on pre-selected surfaces.

**WO 00/01463 A1**

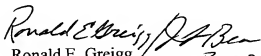
This patent teaches a filter device for filtering soot particles from diesel engine exhaust gases comprising a casing and a shaped porous filter body. The filter body is preferably made of silicon carbide, SiC, such as a honeycomb structure wall flow filter body made from SiC particles. A membrane made from particles and/or fibers having a smaller pore size than the filter body is applied on the gas outlet side surfaces of the filter body. A

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catalytically active coating is applied on, and in the interior of, the filter body, for example, on a wash coating. The design of the filter body with the small pore size membrane applied to outlet surfaces allows soot particles to travel into the interior of the filter which has relatively large pores and where they are removed by decomposition by contact with the catalyst deposited in the filter body. Due to the small pore size of the membrane on the outlet side, the filter is able to remove very small soot particles, and due to the large active area where an oxidation catalyst and the trapped soot interact, the temperature at which the soot is decomposed is relatively low.

Examination of this application is respectfully requested.

Respectfully submitted,

  
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Substitute for form 1449A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

of

Application Number

Filing Date

First Named Inventor

Stephan Wurstthorn et al.

Art Unit

Examiner Name \_\_\_\_\_

Attorney Docket Nu

R.304144

JC13 Rec'd PGT/PTO 13 APR 2005

## U.S. PATENT DOCUMENTS

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## FOREIGN PATENT DOCUMENTS

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Examiner  
Signature

Date Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if the English language Translation is attached.

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